PATENT SPECIFICATION

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(54) A DEVICE FOR MOUNTING TIMBER JOISTS AND LIKE MEMBERS IN BRICKWORK

(71) I, JOHN GRINDOD, a British Subject of, 43 Gleneagles Road, Heald Green, Cheadle, Cheshire, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:

This invention relates to a device for application to a portion of a timber joist to prevent the transfer of moisture thereto from adjacent brickwork.

During construction of a building, the timber joists, rafters, purlins and like members are usually placed directly in contact with, and in most cases let into, the brickwork where they are liable to deterioration in the event of damp in the brickwork, through absorption of moisture therefrom. In many instances this results in the necessity to replace whole joists or at least sections thereof, and it is common practice during replacement of a joist to protect same by wrapping those portions thereof normally coming into contact with the brickwork, with some flexible and impermeable material such as that used in a damp-proof course. This work is time consuming and is therefore often carried out improperly, or not at all.

An object of the present invention is to provide a device for application to timber joists and like members, which will prevent the transfer of moisture to the timber, and which is of simple construction, easy to apply rapidly, and which can thus be applied during initial construction of the building without incurring unreasonable extra cost.

According to the present invention there is provided a device for application to a portion of a timber joist to prevent the transfer of moisture thereto from adjacent brickwork, the device comprising a sleeve of substantially moisture - impermeable, rigid or semi-rigid material and including at least a base and side walls to receive the portion of the joist, each inner contact surface of the sleeve being formed with a plurality of ribs or other protuberances thus, in use, to permit the passage of air or other fluids around the covered faces of the joist.

Here, and throughout the specification, the term brickwork is to be construed as including any other part of a building having potentially moisture-bearing surfaces, such as concrete floors or plinths.

Several embodiments of the invention will now be described by way of example, with reference to the several figures of the accompanying drawings, wherein like parts are indicated by like reference numerals.

Referring now to the drawings, Fig. 1 shows a sleeve generally indicated at 10 and consisting of side walls 11, an upper wall 12, and a base 13. An end wall 14 serves to close the sleeve 10 at one end thereof, and outwardly projecting flange plates 15 extend from two opposite edges of the end wall 14 to lie at right angles with respect to the side walls 11.

The inner surfaces of walls 11 and 12, and base 13 are fluted, to provide channels extending longitudinally from the open end of the sleeve to the end wall 14, similar fluting being provided on the end wall itself and extending from top to bottom thereof.

In use, the sleeve 10 is placed over the end of a timber joist and therefore serves to protect same by preventing contact between the timber and the surrounding brickwork, indicated here at 20. The sleeve may be fixed with respect to the joist by nailing where indicated at 16. The flange plates 15, being disposed on the side of the brickwork remote from the joist, serve to prevent the latter from being drawn outwardly with respect to the brickwork, for

example, when floor board cramps are used. The plates 15 also serve to provide additional rigidity between the floor and the brickwork in these regions.

The embodiment shown in Fig. 2 differs from that of Fig. 1 only in that the flange plates 15 are replaced by flange plates 17 mounted at the open end of the sleeve. This embodiment may be used, for example, for mounting floor joists in a basement where the joists are visible, and the flange plates 17 thus serve to provide an aesthetic finish to the device on at least two sides thereof. The remaining two sides are left free for packing and pointing in the usual way. Again, all internal walls are fluted as described with reference to Fig. 1.

The sleeve illustrated in Fig. 3 is similar to those illustrated in Figs. 1 and 2 with the exception that no flange plates are provided. Here, a joist is illustrated at *J*. This embodiment may be used where no floor board cramps are to be used and where the joist is not usually visible.

In Fig. 4, a further embodiment is illustrated in which the upper wall 12 has been omitted, and a plate 18 extends upwardly from the end wall 14 as an extension thereof. The plate 18 has an aperture 19 for receiving a bolt or like fixing means. This embodiment may be used to protect and support the free end of a timber joist where the latter extends to, but not within, the brickwork. Again, the side walls 11, base 13, and end wall 14 are fluted. If required, the plate 18 may extend to provide a portion at right angles thereto to be let into the brickwork for fixing. A similar plate may be provided at the lower end of the wall 14.

The embodiment illustrated in Fig. 5 provides a pair of side walls 11 and a base 13 alone. This embodiment is primarily for use where a joist passes over a supporting wall below floor level where at least the base and possibly the side walls of the joist would normally be in contact with the brickwork of the supporting wall. As no end wall is provided the sleeve can be applied readily to the joist in situ without gaining access to the end thereof by jacking up the joist to allow the sleeve to be inserted. Again, the side walls 11 and the base 13 are fluted.

It will be appreciated that the various embodiments here illustrated are intended for use in different applications of timber joists or other timbers such as rafters and purlins, to brickwork, whilst being linked by the common feature whereby at least those faces of the timbers which normally contact the said surfaces, or at least are located closely adjacent same, are covered and thus protected against the transfer of moisture. The fluting in each embodiment provides a plurality of open channels between the walls of the sleeve and the corresponding timber faces, which permit ventilation as well as, if required, the introduction and passage of a liquid or gaseous preservative substance to be applied to the timber.

It is envisaged that the device will be constructed from a corrosion-resistant metal such as galvanised mild steel, or alternatively from plastics. In the embodiment shown in Fig. 4, the material of the sleeve must be such as will support the joist in use.

The material selected for the device is preferably of a fire-resistant nature thus rendering the member to which the device is applied less readily combustible in the end regions.

The embodiments illustrated in Figs. 2, 3, 4 and 5 can be used where joists, or sections thereof in an existing building are to be replaced, or, with the addition of the embodiment shown in Fig. 1, in the initial construction.

It is not intended to limit the invention to the above examples only, many further variations, such as might readily occur to one skilled in the art, being possible without departing from the scope of the invention.

For example, in cases where the side walls of the sleeve are of a length somewhat greater than the thickness of the brick wall, the end wall, where shown may be omitted. Furthermore, in some cases, the fluting may be replaced by other protuberances such as a plurality of studs on the inner surfaces.

WHAT I CLAIM IS:—

1. A device for application to a portion of a timber joist to prevent the transfer of moisture thereto from adjacent brickwork, the device comprising a sleeve of substantially moisture-impermeable, rigid or semi-rigid material and including at least a base and side walls to receive the portion of the joist, each inner contact surface of the sleeve being formed with a plurality of ribs or other protuberances thus, in use, to permit the passage of air or other fluids around the covered faces of the joist.

2. A device according to claim 1, wherein said sleeve further includes a top and one end wall, there being a pair of flange plates extending outwardly from the sides of said end wall and in the plane thereof to overlie adjacent brickwork.

3. A device according to claim 1, wherein said sleeve further comprises a top and one end wall, there being a pair of flange plates extending outwardly from the ends of said side walls remote from said end wall, to overlie adjacent brickwork.

4. A device according to claim 1, where-

in said sleeve further comprises an end wall extending outwardly from said base throughout the height of said side walls, a fixing plate extending from the upper end of said end wall and including means for enabling the device to bolted or otherwise fixed to adjacent brickwork.

5. A device according to any one of the preceding claims wherein said sleeve is made from galvanised mild steel.

6. A device according to any one of claims 1 to 4, wherein said sleeve is made from plastics.

7. A device for application to a portion of a timber joist substantially as herein-before described with reference to and as illustrated in the several figures of the accompanying drawings.

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1 SHEET
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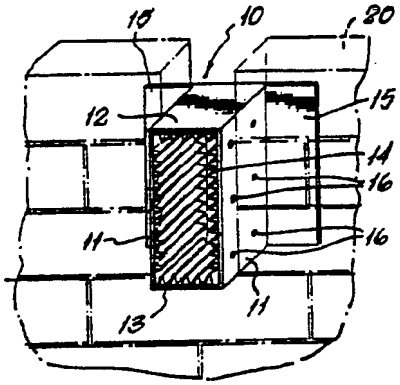

FIG. 1

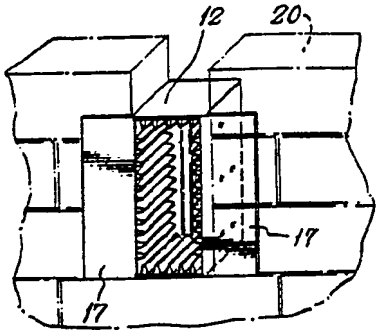

FIG. 2

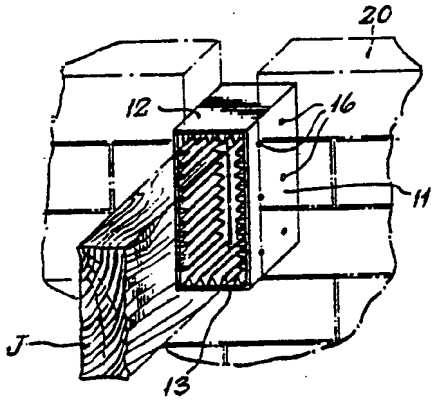

FIG. 3

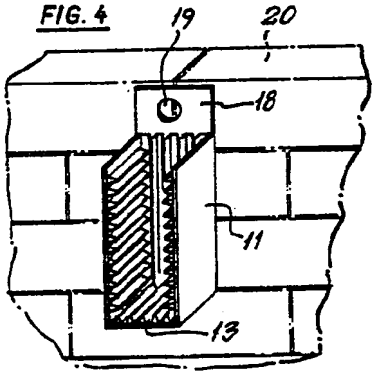

FIG. 4

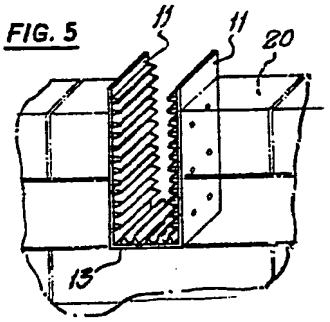

FIG. 5